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PTO/SB/21 (04-04)

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## TRANSMITTAL FORM

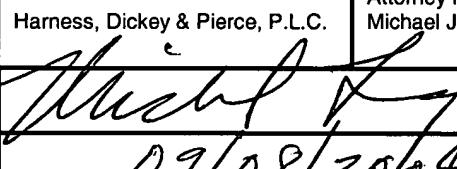
(to be used for all correspondence after initial filing)

		Application Number	10/791,377
		Filing Date	March 2, 2004
		First Named Inventor	Dantus et al.
		Art Unit	not yet assigned
		Examiner Name	not yet assigned
Total Number of Pages in This Submission		Attorney Docket Number	6550-000057/CPE

### ENCLOSURES (check all that apply)

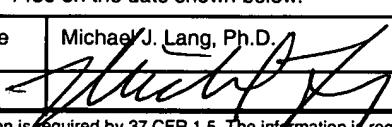
<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to Technology Center (TC)
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
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<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
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<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	<b>Form 1449; copies of 2 foreign documents; copies of 97 other documents; and return postcard.</b>
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Certified Copy of Priority Document(s)		
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application		
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<div style="border: 1px solid black; padding: 2px; display: inline-block;">Remarks</div> <div style="margin-left: 10px;">The Commissioner is hereby authorized to charge any additional fees that may be required under 37 CFR 1.16 or 1.17 to Deposit Account No. 08-0750. A duplicate copy of this sheet is enclosed.</div>		

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Harness, Dickey & Pierce, P.L.C.	Attorney Name Michael J. Lang, Ph.D.	Reg. No. 51,120
Signature			
Date	09/08/2004		

### CERTIFICATE OF TRANSMISSION/MAILING

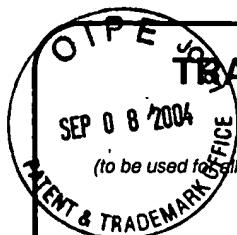
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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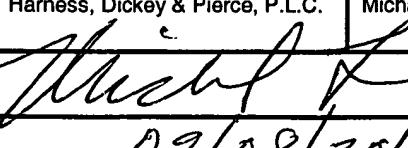


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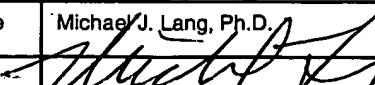
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<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<b>Remarks</b> The Commissioner is hereby authorized to charge any additional fees that may be required under 37 CFR 1.16 or 1.17 to Deposit Account No. 08-0750. A duplicate copy of this sheet is enclosed.	
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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/791,377

Filing Date: March 2, 2004

Applicant: M. Dantus et al.

Group Art Unit: not yet assigned

Examiner: not yet assigned

Title: LASER SYSTEM USING ULTRA-SHORT LASER PULSES

Attorney Docket: 6550-000057/CPE

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Director of the United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant hereby submits an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS, AND OTHER INFORMATION

The patents, publications and other information requested to be considered by the Office (except unpublished U.S. patent applications) are listed on Form 1449 attached hereto.

II. COPIES

A.  Submitted herewith is a legible copy of (i) each U.S. patent application publication and U.S. and foreign patent; (ii) each publication or that portion which caused it to be listed; (iii) for each cross-referenced pending U.S. application listed below in Section IV, the application specification including the claims, and any drawing of the application which caused it to be listed including the claims directed to that portion; and (iv) all other information or that portion which caused it to be listed.

B.  Any patents, publications or other information which are listed on Form 1449 or on the copies of PTO-892, but which are not enclosed herewith, were previously cited by or submitted to the PTO in one of the following applications which has been relied upon for an earlier filing date under 35 U.S.C. § 120:

U.S. Serial Number

U.S. Filing Date

C.  Because the present application was/is being filed after June 30, 2003, no copies of the U.S. patents or U.S. patent application publications which are listed on the attached Form 1449 are enclosed pursuant to the waiver of 37 C.F.R. § 1.98(a)(2)(i). Any foreign patent documents or non-patent literature listed on the attached Form 1449 are enclosed herewith.

D.  This is a PCT application in the entry of the National Phase in the United States. A copy of the International Search Report is attached for the Examiner's information. The documents listed on the International Search Report are listed on the attached Form-1449 for consideration by the Examiner and for listing on any patent resulting from this application. If the International Search Report was from the US, EPO, or JPO search authorities, copies of these references should have been supplied to the USPTO under the trilateral agreement and are believed to be in the file of the above-identified application. (MPEP 1893.03(g))

III. CONCISE EXPLANATION OF THE RELEVANCE (check at least one box)

A.  Except as may be indicated below in (B), all of the patents, publications or other information are in the English language (concise explanation not required).

B.  A concise explanation of the relevance of each patent, publication or other information listed that is not in the English language is as follows (see 37 C.F.R. § 1.98(a)(3)):

1.  See the attached foreign patent office communication from a counterpart foreign application.
2.  English translations are provided.
3.  Other:

C.  The following additional information is provided for the Examiner's consideration.

The following references appear somewhat more relevant than others cited herein: U.S. Patent Nos. 3,919,881; 3,988,704; 4,819,239; 4,913,934; 5,048,029; 5,585,913; 6,480,656; 6,504,612; and Weiner, A.M. (2000); Zheng, Z. (2001); Lozovoy, V.V. (2003). Notwithstanding, the Examiner is requested to review all of the cited references and make his/her own relevancy determinations.

IV. CROSS REFERENCE TO RELATED APPLICATION(S)

A.  The Examiner is advised that the following co-pending application(s) contain(s) subject matter that may be related to the present application. By bringing this(these) application(s) to the Examiner's attention, Applicant(s) does(do) not waive the confidentiality provisions of 35 U.S.C. § 122.

Serial No.  
10/265,211

Filing Date  
January 28, 2002

Art Unit

V. THIS IDS IS BEING FILED UNDER

A.  37 C.F.R. § 1.97(b): (check only one box)

1.        within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d) (37 C.F.R. § 1.97(b)(1)). No fee or certification is required.
2.        within three months of the date of entry of the national stage as set forth in §1.491 in an international application (37 C.F.R. § 1.97(b)(2)). No fee or certification is required.
3.        before the mailing of a first Office Action on the merits (37 C.F.R. § 1.97(b)(3)). No fee or certification is required. In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the certification under 37 C.F.R. § 1.97(e) below; or, if no certification has been made, charge our deposit account a fee in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).
4.        before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No fee or certification is required.

B.  37 C.F.R. § 1.97(c): (check only one box)

before the mailing date of either any Final Office Action under 37 C.F.R. § 1.113, a Notice of Allowance under 37 C.F.R. § 1.311, or an action that otherwise closes prosecution.

1.        No certification; therefore, a fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).
2.        See the certification below. No fee is required.

C.  37 C.F.R. § 1.97(d):

after the mailing date of either a Final Office Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311, yet on or before payment of the issue fee.

1.        See the certification below. A fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).

VI. CERTIFICATION UNDER 37 C.F.R. § 1.97(e): (check only one box)

The undersigned hereby certifies that:

A.  each item of information contained in this IDS was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(1)). See further statement under 37 C.F.R. 1.704(d) below in section VII, if applicable; or

B.  no item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(2)).

C.  Some of the items of information were first cited in a communication from a foreign patent office. As to this information, the undersigned hereby certifies that each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS.

VII. STATEMENT UNDER 37 CFR 1.704(d)

The undersigned hereby states that:

each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this IDS.

VIII. PAYMENT OF FEES (check only one box)

A.  A check in the amount of \$180.00 is enclosed for the above-identified fee.

B.  Please charge Deposit Account No. 08-0750 in the amount of \$180.00 for the above-indicated fee. A duplicate copy of this paper is attached.

The above references are being cited only in the interest of candor and without any admission that they constitute statutory prior art, contain matter which anticipates the invention, or which would render the same obvious, either singly or in combination,

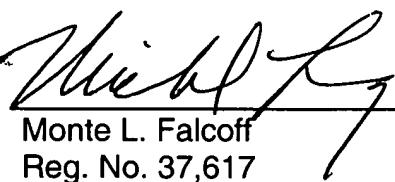
to a person of ordinary skill in the art. Furthermore, this Information Disclosure Statement shall not be construed as a representation that a search has been made.

If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account No. 08-0750.

Please charge any additional fees or credit any overpayment pursuant to 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. 08-0750.

Respectfully submitted,

Dated: 09/08/2004

By:   
Monte L. Falcoff  
Reg. No. 37,617  
Michael J. Lang, Ph.D.  
Reg. No. 51,120

HARNESS, DICKEY & PIERCE, P.L.C.  
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FORM HDP-1449 (Based on Form PTO-1449)

ATTORNEY DOCKET NO.

SERIAL No.

6550-000057/CPE

10/791,377

APPLICANT

Dantus et al.

FILING DATE

GROUP

March 2, 2004

not yet assigned

PATENT AND TRADEMARK OFFICE  
INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 1 of 10



## U.S. PATENT DOCUMENTS

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
1.		2003/0099264	10/2002	Dantus et al.		
2.		3,919,881	11/1975	Metherell		
3.		3,988,704	10/1976	Rice et al.		
4.		4,655,547	4/1987	Heritage et al.		
5.		4,746,193	5/1988	Heritage et al.		
6.		4,819,239	4/1989	Sharp et al.		
7.		4,866,699	9/1999	Brackett et al.		
8.		4,913,934	4/1990	Sharp et al.		
9.		4,928,316	5/1990	Heritage et al.		
10.		5,034,613	7/1991	Denk		
11.		5,048,029	9/1991	Skupsky et al.		
12.		5,132,824	7/1992	Patel et al.		
13.		5,239,607	8/1993	da Silva et al.		
14.		5,526,171	6/1996	Warren		
15.		5,530,544	6/1996	Trebino et al.		
16.		5,585,913	12/1996	Hariharan et al.		
17.		5,754,292	5/1998	Kane et al.		
18.		5,759,767	6/1998	Lakowicz		
19.		5,774,213	6/1998	Trebino et al.		
20.		5,793,091	8/1998	Devoe		
21.		5,832,013	11/1998	Yessik et al.		

Examiner:

Date Considered:

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM HDP-1449 (Based on Form PTO-1449)

**PATENT AND TRADEMARK OFFICE**  
**INFORMATION DISCLOSURE CITATION**  
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Sheet 2 of 10

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APPLICANT	
Dantus et al.	
FILING DATE	GROUP
March 2, 2004	not yet assigned

**U.S. PATENT DOCUMENTS**

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
22.		5,936,732	8/1999	Smirl et al.		
23.		6,008,899	12/1999	Trebino et al.		
24.		6,042,603	3/2000	Dees et al.		
25.		6,057,919	5/2000	Machida et al.		
26.		6,111,251	8/2000	Hillenkamp		
27.		6,130,426	10/2000	Park et al.		
28.		6,166,385	12/2000	Webb		
29.		6,219,142	4/2001	Kane		
30.		6,259,104	7/2001	Baer		
31.		6,288,782	9/2001	Worster		
32.		6,316,153	11/2001	Goodman		
33.		6,327,068	12/2001	Silberberg et al.		
34.		6,344,653	2/2002	Webb		
35.		6,480,656	11/2002	Islam et al.		
36.		6,504,612	1/2003	Trebino		
37.		6,566,667	5/2003	Partli et al.		
38.		6,577,782	6/2003	Leaird et al.		
39.		6,621,613	9/2003	Silberberg et al.		
40.		6,678,450	1/2004	Franson		

Examiner:

Date Considered:

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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		APPLICANT	
		Dantus et al.	
		FILING DATE	GROUP
		March 2, 2004	not yet assigned
Sheet 3 of 10			

FOREIGN PATENT DOCUMENTS						
Ref. Desig.	Examiner's Initials	Document Number	Date	Country	Class/ Subclass	Translation Yes No
1.		WO 02 061799	01/2002	PCT		
2.		WO 00 70647	11/2000	PCT		

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)	
Ref. Desig.	Examiner's Initials
1.	Anderson, M.E. et al.; "The effects of noise on ultrashort-optical-pulse measurement using SPIDER"; Appl. Phys. B 70 (Suppl.); 2000; pgs. S85-S93.
2.	Assion, A. et al.; "Control of Chemical Reactions by Feedback-Optimized Phase-shaped Femtosecond Laser Pulses"; Science Magazine, Vol. 282; October 30, 1998; pgs. 919-922.
3.	Baltuska, Andrius et al.; "Amplitude and phase characterization of 4.5-fs pulses by frequency-resolved optical gating"; Optics Letters, Vol. 23, No. 18, September 15, 1998; pgs. 1474-1476.
4.	Baltuska, Andrius et al.; "Visible pulse compression to 4 fs by optical parametric amplification and programmable dispersion control"; Optics Letters, Vol. 27, No. 5, March 1, 2002; pgs. 306-308.
5.	Baumert, T. et al.; "Femtosecond pulse shaping by an evolutionary algorithm with feedback"; Appl. Phys. B 65 (1997); pgs. 779-782.
6.	Belfield, K.D. et al.; "Two-photon photoinitiated polymerization"; J. Phys. Org. Chem. 13(12): 837-849 (December 2000).
7.	Bhattacharya, N. et al.; Phys. Rev. Lett. 88 (2002) 137901-1.
8.	Brattke, S. et al.; "Generation of Photon Number States on Demand via Cavity Quantum Electrodynamics"; Phys. Rev. Lett.; April 16, 2001; Vol. 86, No. 16; pp. 3534-3537.
9.	Brixner, T. et al.; "Feedback-controlled femtosecond pulse shaping"; Appl. Phys. B 70 (Suppl.) 2000; pgs. S119-S124.
10.	Broers, B. et al.; "Diffraction and focusing of spectral energy in multiphoton processes"; Phys. Rev. A; 1992; 46, 2749.
11.	Broers, B. et al.; "Large interference effects of small chirp observed in 2-photon absorption"; Opt. Commun. 1992, 91, 57.

Examiner:	Date Considered:
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EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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<b>PATENT AND TRADEMARK OFFICE</b> <b>INFORMATION DISCLOSURE CITATION</b> <small>(Use several sheets if necessary)</small>		APPLICANT	
Sheet 4 of 10		Dantus et al.	
		FILING DATE	GROUP
		March 2, 2004	not yet assigned

<b>OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)</b>		
Ref. Desig.	Examiner's Initials	
12.		Bucksbaum, Philip; "An atomic dimmer switch"; Nature; November 19, 1998; Vol. 396; pp. 217-219.
13.		Buist, A.H. et al.; "Probing microscopic chemical environments with high-intensity chirped pulses"; Optics Letters 24, 244-246 (1999).
14.		Chilla, Juan L.A. et al.; "Direct determination of the amplitude and the phase of femtosecond light pulses"; January 1, 1991, Vol. 16, No. 1; Optics Letters; pgs. 39-41.
15.		Chu, K.C. et al.; "Direct measurement of the spectral phase of femtosecond pulses"; Optics Letters, Vol. 20, No. 8; April 15, 1995; pgs. 904-906.
16.		Clara et al.; "Femtosecond laser mass spectroscopy of ferrocenes: photochemical stabilization by bridged cyclopentadienyl rings?"; International Journal of Mass Spectrometry, Elsevier Science Publishers; Vol. 203, no. 1-3; December 26, 2000; pp. 71-81.
17.		Clement, Tracy Sharp et al.; "Single-Shot measurement of the amplitude and phase of ultrashort laser pulses in the violet"; January 1, 1995; Optics Letters, Vol. 20, No. 1; pgs. 70-72.
18.		Cormack, I.G. et al.; "Practical measurement of femtosecond optical pulses using time-resolved optical gating"; Optics Communications 194 (July 15, 2001); pgs. 415-424.
19.		Cumpston, B.H. et al.; "New Photopolymers based on Two-Photon Absorbing Chromophores and Application to Three-Dimensional Microfabrication and Optical Storage"; Mat. Res. Soc. Symp. Proc.; Vol 488.
20.		Cumpston, B.H. et al.; "Two-photon polymerization initiators for three-dimensional optical data storage and microfabrication"; Letters to Nature, pp. 51-54.
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